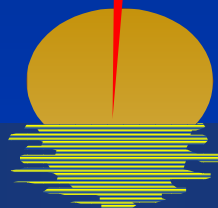


# INCIDENT INVESTIGATION

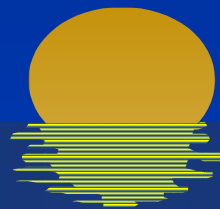
Ken Roberts, MS, CIH, CSP  
Environmental Services Officer  
Pima County Facilities  
Management



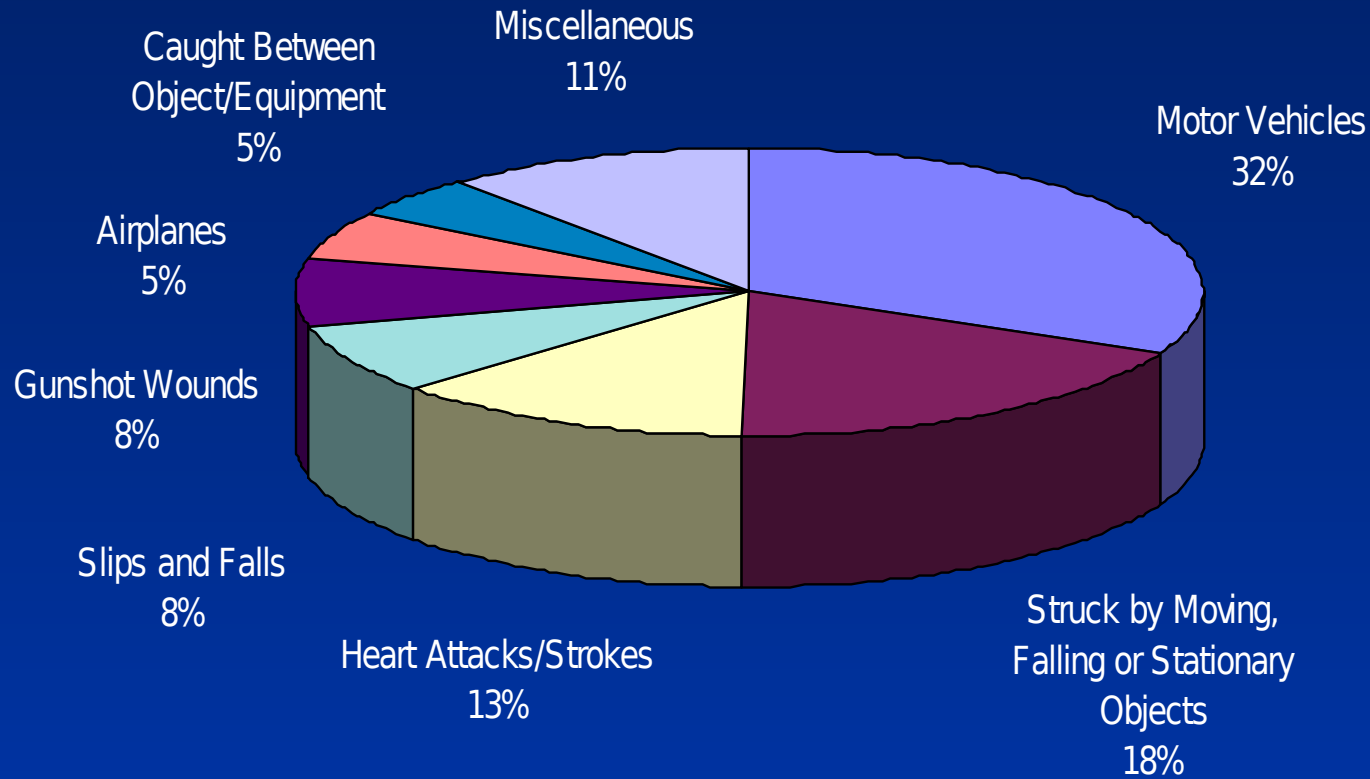
# What's your Favorite Hobby?



Whale Shark with Snorkeler

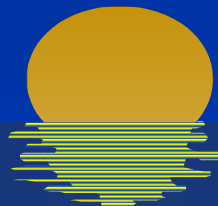


# Leading Causes of Workplace Deaths



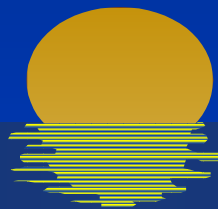
# The Aim of the Investigation

1. EXONERATE INDIVIDUALS OR MANAGEMENT
2. SATISFY INSURANCE REQUIREMENTS
3. DEFEND A POSITION FOR LEGAL ARGUMENT
4. OR, TO ASSIGN BLAME



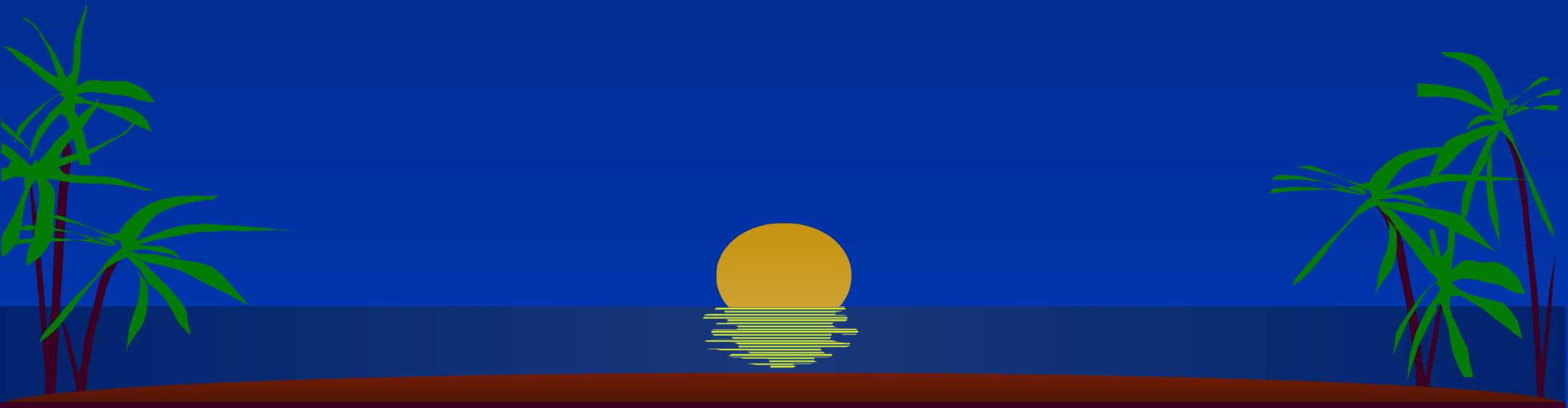
# The Aim of the Investigation

THE KEY RESULT SHOULD BE TO  
PREVENT A RECURRENCE OF THE  
SAME ACCIDENT



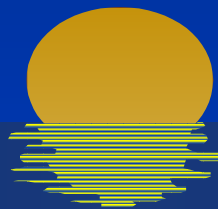
# THE ACCIDENT

WHAT IS AN ACCIDENT?



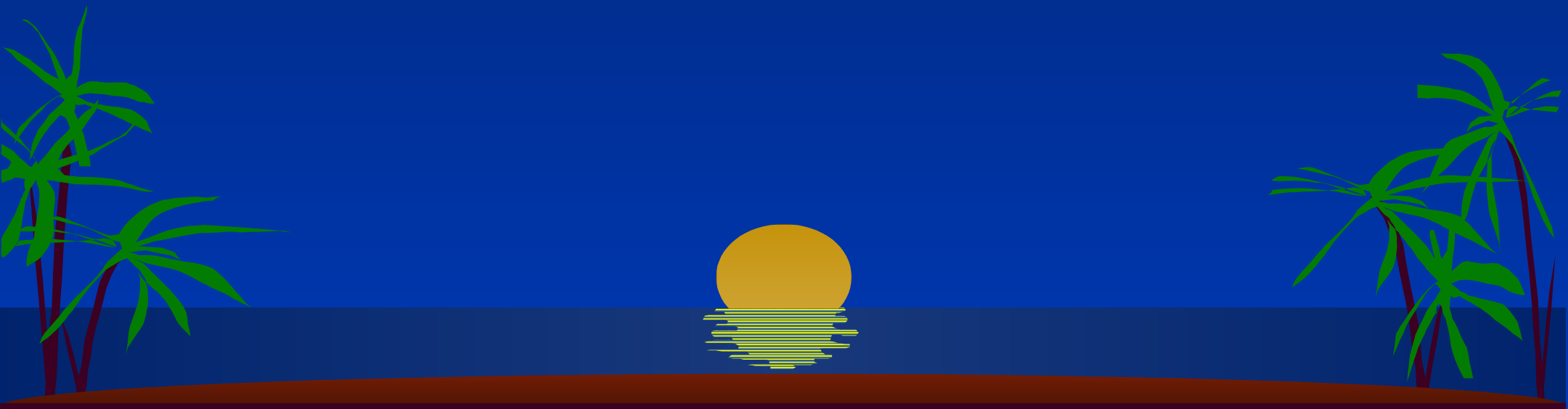
# THE ACCIDENT

AN UNPLANNED AND UNWELCOMED  
EVENT WHICH INTERRUPTS  
NORMAL ACTIVITY.



# THE ACCIDENT

## THREE BASIC TYPES OF ACCIDENTS

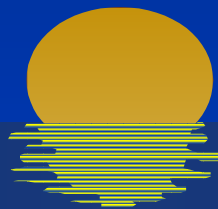




# THE ACCIDENT

MINOR ACCIDENTS:

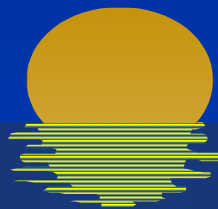
SUCH AS PAPER CUTS TO FINGERS  
OR DROPPING A BOX OF  
MATERIALS



# THE ACCIDENT

MORE SERIOUS ACCIDENTS THAT  
CAUSE INJURY OR DAMAGE TO  
EQUIPMENT OR PROPERTY:

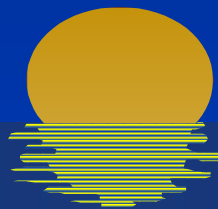
SUCH AS A FORKLIFT DROPPING A  
LOAD OR SOMEONE FALLING OFF A  
LADDER



# THE ACCIDENT

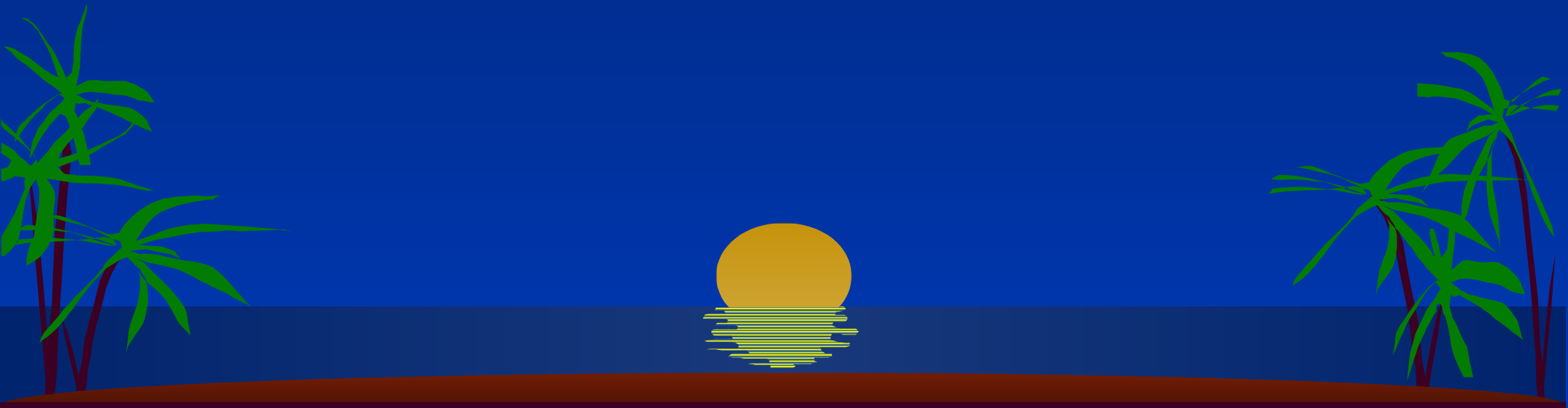
ACCIDENTS THAT OCCUR OVER AN  
EXTENDED TIME FRAME:

SUCH AS HEARING LOSS OR AN  
ILLNESS RESULTING FROM  
EXPOSURE TO CHEMICALS



# THE ACCIDENT

ACCIDENTS HAVE TWO THINGS IN  
COMMON



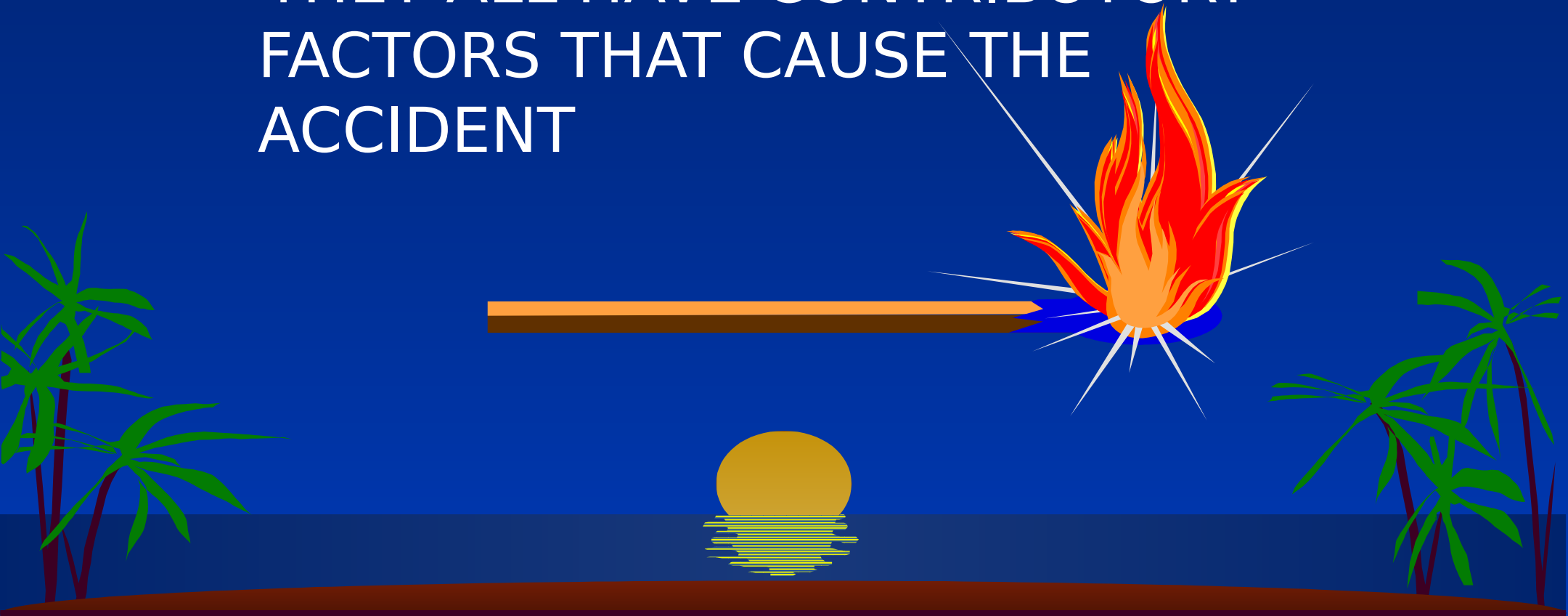
# THE ACCIDENT

THEY ALL HAVE OUTCOMES FROM  
THE ACCIDENT



# THE ACCIDENT

THEY ALL HAVE CONTRIBUTORY  
FACTORS THAT CAUSE THE  
ACCIDENT



# OUTCOMES OF ACCIDENTS

## 1. NEGATIVE ASPECTS

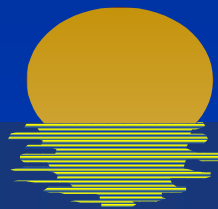
- DEATH & INJURY
- DISEASE
- DAMAGE TO EQUIPMENT & PROPERTY
- LITIGATION COSTS
- LOST PRODUCTIVITY



# OUTCOMES OF ACCIDENTS

## 2. POSITIVE ASPECTS

- ACCIDENT INVESTIGATION
- CHANGE TO SAFETY PROGRAMS





# CONTRIBUTING FACTORS

1. ENVIRONMENTAL

2. DESIGN

3. SYSTEMS & PROCEDURES

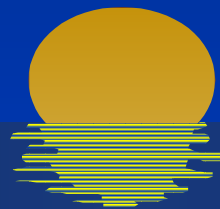
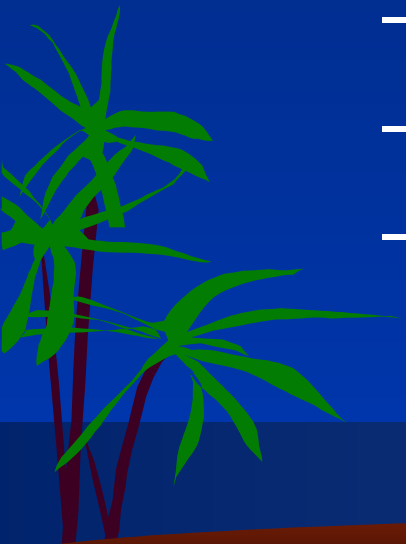
4. HUMAN BEHAVIOUR



# CONTRIBUTING FACTORS

## 1. ENVIRONMENTAL

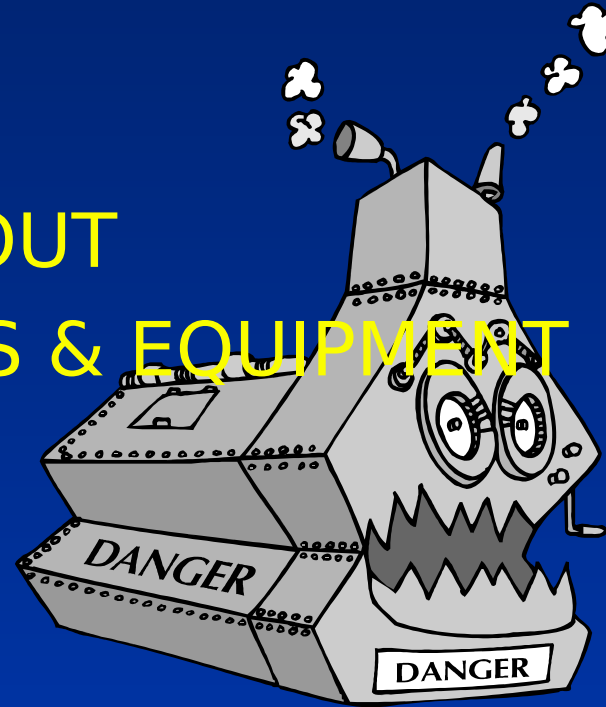
- NOISE
- VAPORS, FUMES, DUST
- LIGHT
- HEAT
- CRITTERS



# CONTRIBUTING FACTORS

## 2. DESIGN

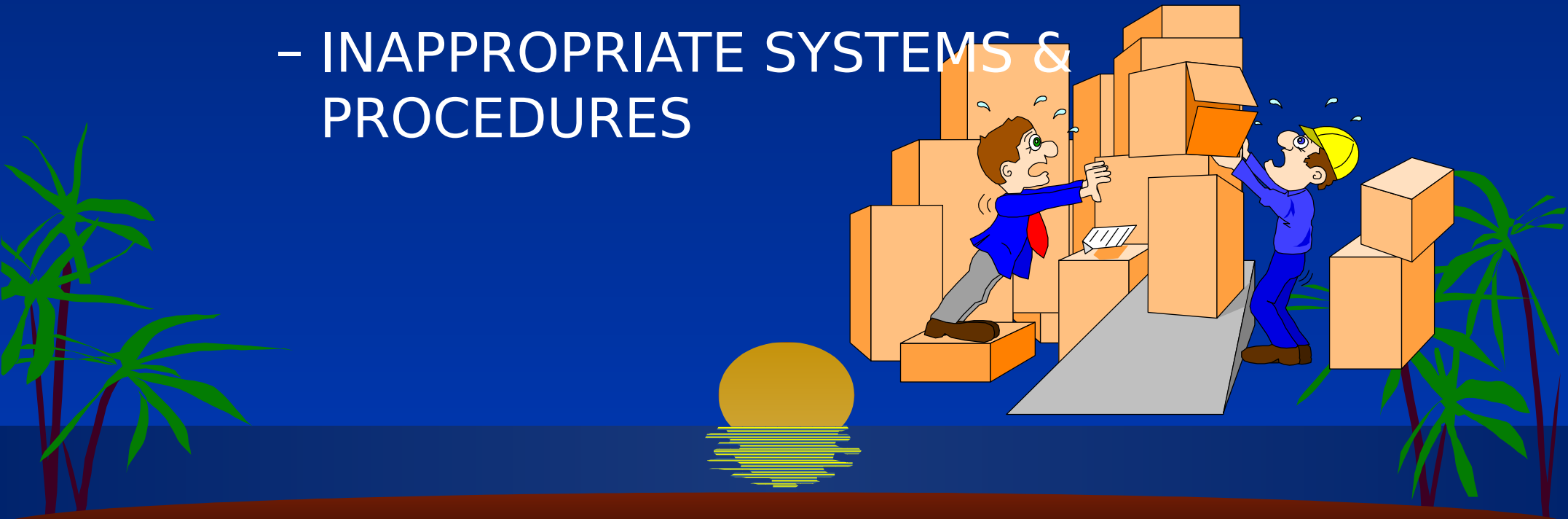
- WORKPLACE LAYOUT
- DESIGN OF TOOLS & EQUIPMENT



# CONTRIBUTING FACTORS

## 3. SYSTEMS & PROCEDURES

- LACK OF SYSTEMS & PROCEDURES
- INAPPROPRIATE SYSTEMS & PROCEDURES

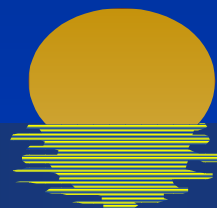
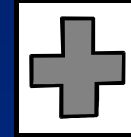


# CONTRIBUTING FACTORS

## 4. HUMAN BEHAVIOUR

- COMMON TO ALL ACCIDENTS
- NOT LIMITED TO THE PERSON INVOLVED IN THE ACCIDENT

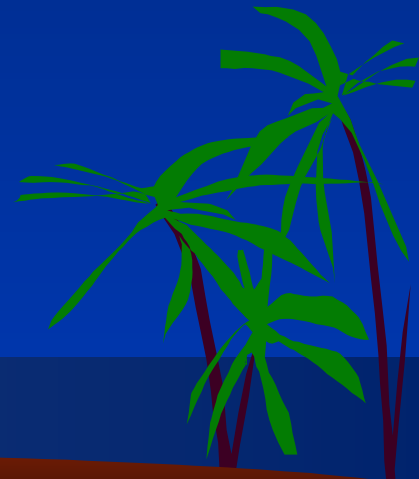
ADMITTING



# WHO SHOULD INVESTIGATE

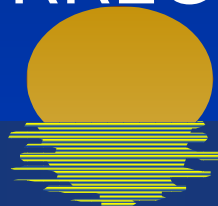
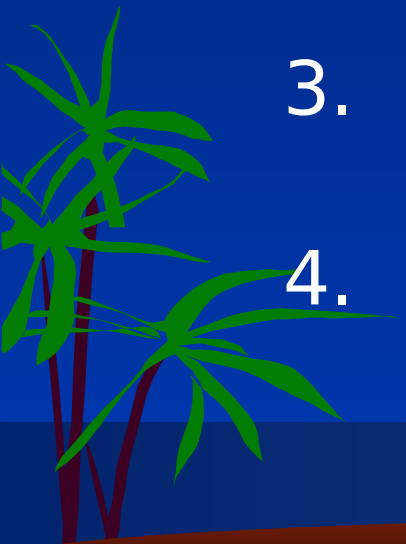
DEPENDENT ON SEVERITY OF THE  
ACCIDENT

- INVESTIGATION TEAM
  - ◆ INDIVIDUALS INVOLVED
  - ◆ SUPERVISOR
  - ◆ SAFETY SUPERVISOR
  - ◆ UPPER MANAGEMENT
  - ◆ OUTSIDE CONSULTANTS



# INVESTIGATION STRATEGY

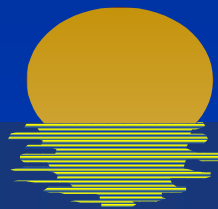
1. GATHER INFORMATION & ESTABLISH FACTS
2. ISOLATE ESSENTIAL CONTRIBUTORY FACTORS
3. DETERMINE CORRECTIVE ACTIONS
4. IMPLEMENT CORRECTIVE ACTIONS



# INVESTIGATION STRATEGY

## FACT GATHERING

- BE IMPARTIAL & OBJECTIVE
- COMPILE PROCEDURES & RULES FOR THE AREA
- GATHER MAINTENANCE RECORDS ON EQUIPMENT INVOLVED

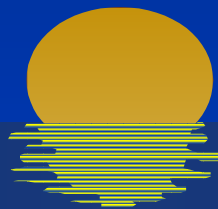




# INVESTIGATION STRATEGY

## FACT GATHERING (CONTINUED)

- ISOLATE ACCIDENT SCENE
- PHOTOS & DIAGRAMS
- DO NOT DISCARD OR DESTROY ANYTHING

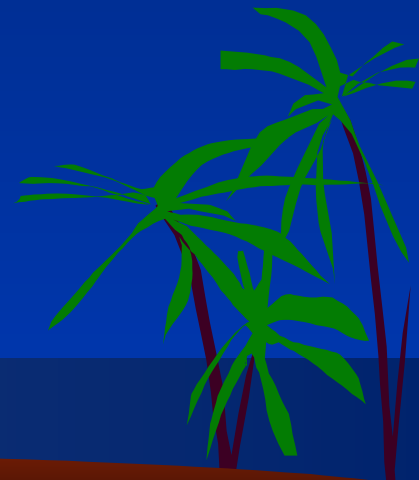
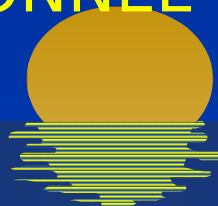


# INVESTIGATION STRATEGY

## FACT GATHERING (CONTINUED)

- TIME IS OF THE ESSENCE
- OBTAIN INFORMATION

- ♦ INJURED
- ♦ WITNESSES
- ♦ SUPERVISORS
- ♦ OTHER PERSONNEL

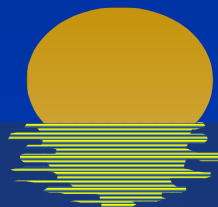


# INVESTIGATION STRATEGY

## FACT GATHERING (CONTINUED)

### – INTERVIEWS (SEPARATELY)

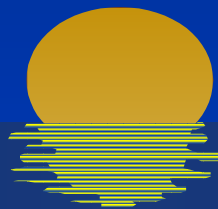
- ♦ WHAT WERE YOU DOING?
- ♦ HOW DO YOU THINK THE ACCIDENT OCCURRED?
- ♦ HOW WERE YOU TRAINED FOR THE JOB?
- ♦ WHAT IS THE SAFETY PROCEDURE FOR THIS JOB?



# INVESTIGATION STRATEGY

## FACT GATHERING (CONTINUED)

- OBTAIN FACTS NOT OPINIONS
- MAKE IT CLEAR THE OBJECT OF THE INVESTIGATION IS TO AVOID RECURRENCE, NOT TO APPORTION BLAME

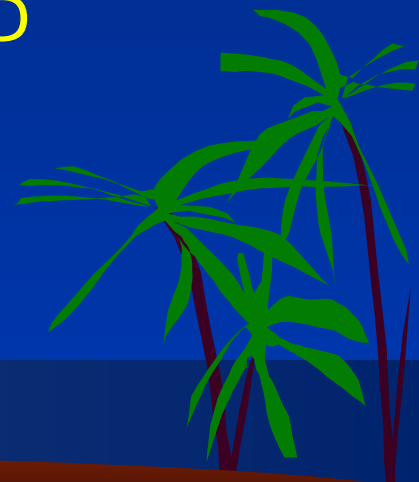
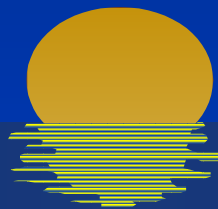


# INVESTIGATION STRATEGY

## ISOLATE ESSENTIAL CONTRIBUTORY FACTORS

- INVESTIGATION TEAM

- ◆ EVALUATES ALL FACTORS CONCERNED

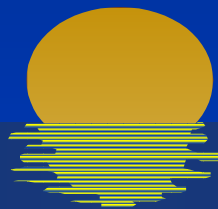


# INVESTIGATION STRATEGY

## ISOLATE ESSENTIAL CONTRIBUTORY FACTORS

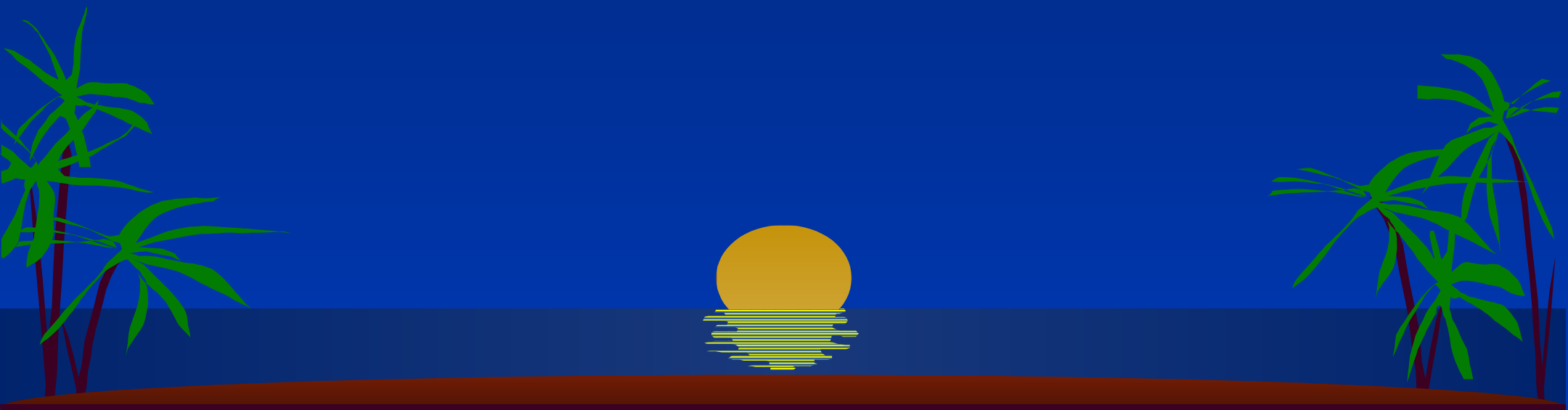
### – INVESTIGATION TEAM

- ◆ ISOLATES THE KEY FACTOR(S) BY ASKING THE FOLLOWING QUESTION....



# INVESTIGATION STRATEGY

WOULD THE ACCIDENT HAVE  
HAPPENED IF THIS PARTICULAR  
FACTOR WAS NOT PRESENT?

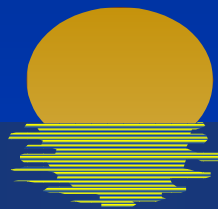


# INVESTIGATION STRATEGY

## DETERMINE CORRECTIVE ACTIONS

### – INVESTIGATION TEAM

- ◆ INTERPRETS & DRAWS CONCLUSION
- ◆ DISTINCTION BETWEEN INTERMEDIATE & UNDERLYING CAUSES



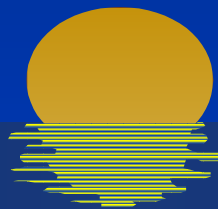


# INVESTIGATION STRATEGY

## DETERMINE CORRECTIVE ACTIONS

### – INVESTIGATION TEAM

- ◆ RECOMMENDATIONS BASED ON KEY CONTRIBUTORY FACTORS AND UNDERLYING CAUSES

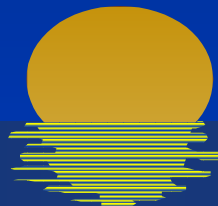


# INVESTIGATION STRATEGY

## IMPLEMENT CORRECTIVE ACTIONS

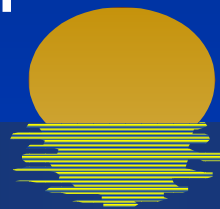
### – INVESTIGATION TEAM

- ◆ RECOMMENDATION(S) MUST BE COMMUNICATED CLEARLY
- ◆ STRICT TIME TABLE ESTABLISHED
- ◆ FOLLOW UP CONDUCTED



# BENEFITS OF ACCIDENT INVESTIGATION

1. PREVENTING RECURRENCE
2. IDENTIFYING OUT-MODED PROCEDURES
3. IMPROVEMENTS TO WORK ENVIRONMENT

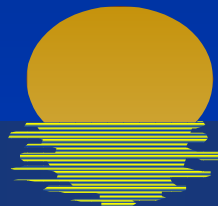


# BENEFITS OF ACCIDENT INVESTIGATION

4. INCREASED PRODUCTIVITY

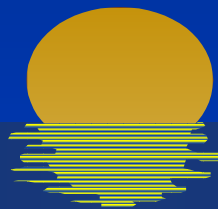
5. IMPROVEMENT OF OPERATIONAL  
& SAFETY PROCEDURES

6. RAISES SAFETY AWARENESS  
LEVEL



# BENEFITS OF ACCIDENT INVESTIGATION

WHEN AN ORGANIZATION REACTS SWIFTLY AND POSTIVELY TO ACCIDENTS AND INJURIES, ITS ACTIONS REAFFIRM ITS COMMITMENT TO THE SAFETY AND WELL-BEING OF ITS EMPLOYEES

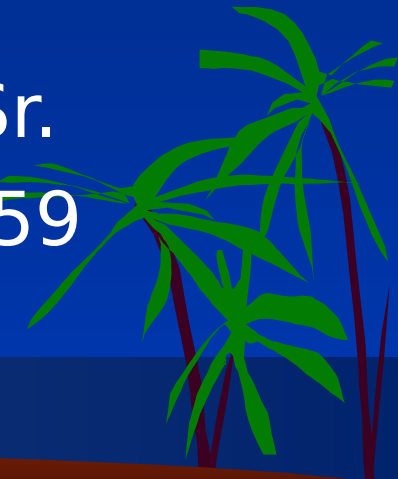
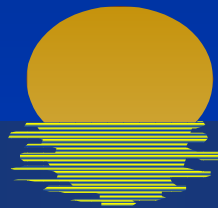
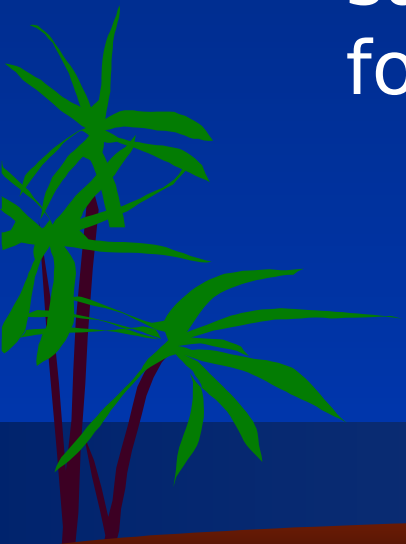


Are we to leave our children a country  
ridden with accidents and their  
corresponding burden of human and  
economic loss?

Or . . . can we prove that as Americans, we  
can progress, both technically and  
morally, to provide our citizens with a life  
and work style worthy of the sufferings,  
sacrifices and expectations of our  
founding fathers?

Raymond J. Colvin, Sr.

NYU.....1959



**SAFETY  
FIRST**

**THE SAFE WAY IS  
THE BEST WAY**

